

Supplemental Material

Involvement of N-6 Adenine-Specific DNA Methyltransferase 1 (N6AMT1) in Arsenic Biomethylation and Its Role in Arsenic-Induced Toxicity

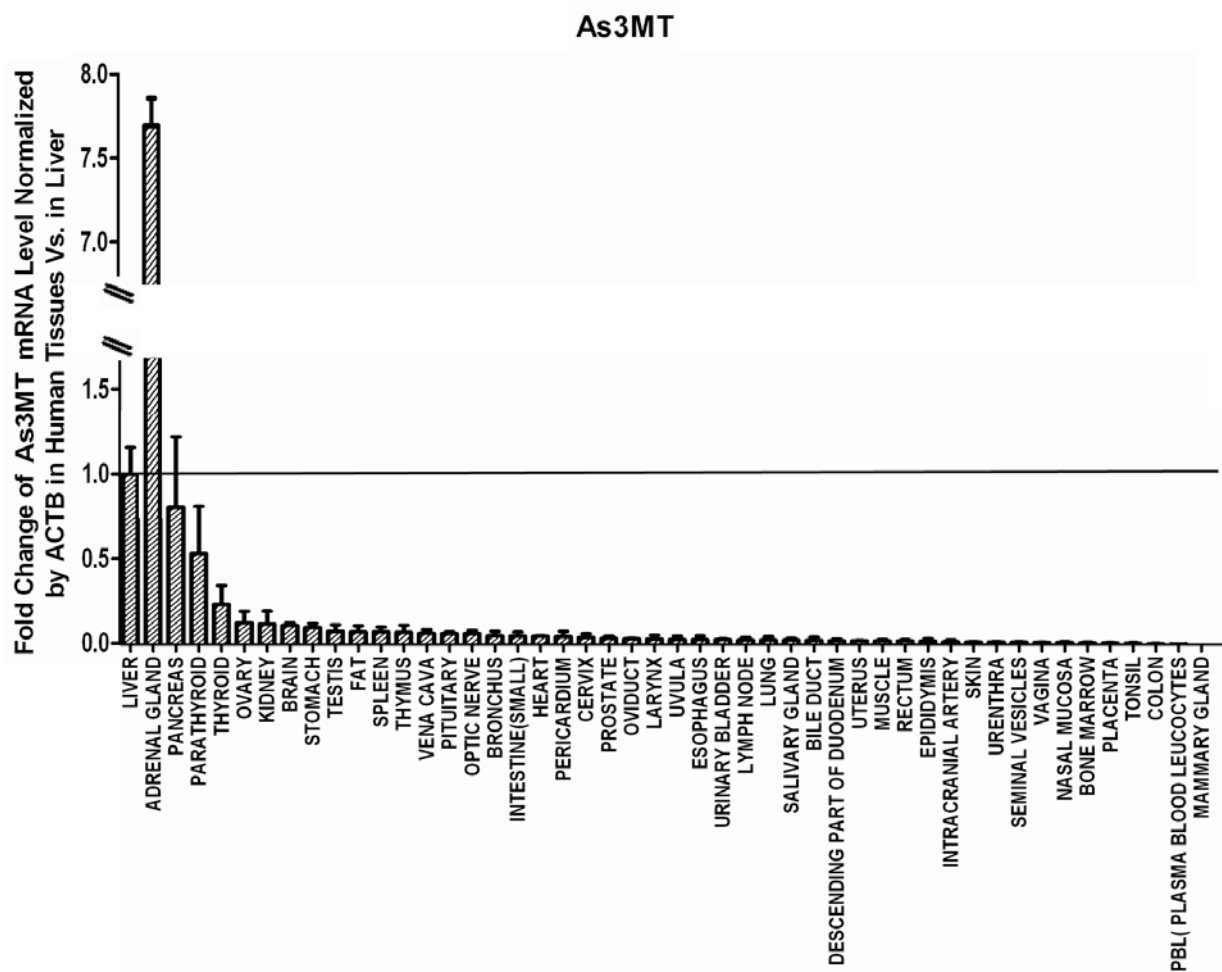
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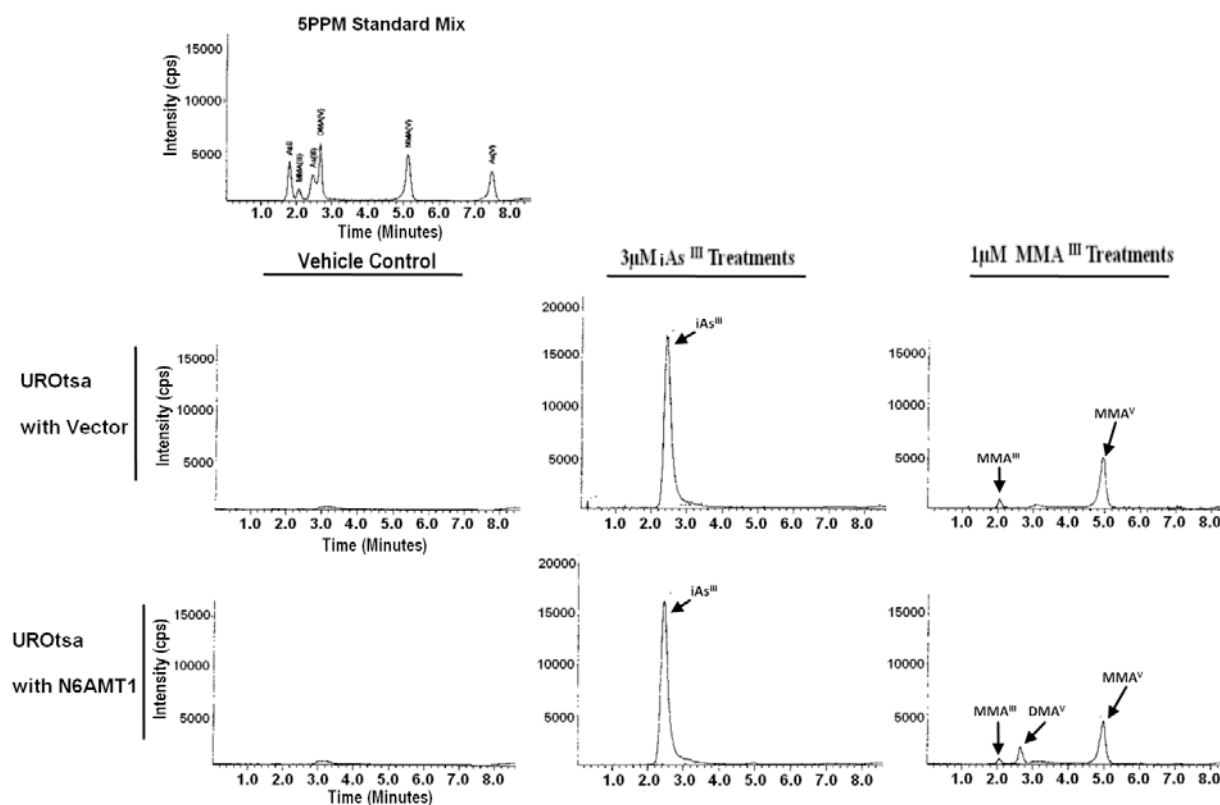
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>gi 87159829 N6AMT1	1	MAGENFATPFHGHVGRGAFSD	21
>gi 109389364 As3MT	1	MAALRDAEIQKDVQTYYGQVLKRSADLQTNGCVTTARVPVKHI-REALQN	49
>gi 87159829 N6AMT1	22	VYEPAEDTFLLLNALEAAAAELA---GVEIC--LEVSGSGGVVSAFLASM	66
>gi 109389364 As3MT	50	VHEEV-----ALRYYGCGLVIPEHLENCWILDGSGSGRDCYVLSQL	91
>gi 87159829 N6AMT1	67	IGPQALYMCTDINP-----EAAACTL-----E	88
>gi 109389364 As3MT	92	VGEKGHVITGIDMTKGQVEVAEKYLDYHMEKYGFQASNVTFIHGYIEKLGE	141
>gi 87159829 N6AMT1	89	TARCNKVHIQPVITDLVKGLLP-----RLTEKVDLLVFNPYPV-V	127
>gi 109389364 As3MT	142	AGIKNESH-DIVVSNCVINLVPDKQQVLQEAYRVLKHGGELYFSDVYTSL	190
>gi 87159829 N6AMT1	128	TPPQEVGSHGI-----EAAWAGGKNGREVMDRFFPLVPDLLS	164
>gi 109389364 As3MT	191	ELPEEIRTHKVLWGEC LGGALYWKELAVLAQKIG-----FCP--PRLVT	232
>gi 87159829 N6AMT1	165	PKGLFYLVTIKENNPEEIL-----KIMKTGQLQ-----G	193
>gi 109389364 As3MT	233	AN---LITIQNKELERVIGDCRFVSATFRLFKHSGTKGPTKRCQVIYNGG	278
>gi 87159829 N6AMT1	194	TTALSR-----QAGQETLSVLKFTKS	214
>gi 109389364 As3MT	279	ITGHEKELMFDANFTFKEGEIVEVDEETAAILKNSRFAQDFLIRPIGEKL	328
>gi 87159829 N6AMT1	215		214
>gi 109389364 As3MT	329	PTSGGCSALELKDIITDPFKLAEESDSMKSRCPDAAGGCCGTTKSC	375

Supplementary Material, Figure 1. Pairwise alignment analysis of N6AMT1 and AS3MT proteins. N6AMT1 and AS3MT proteins share about 25% similarity. Of the three sequence motifs found in most AS3MT homologs, only motif one is highly conserved in N6AMT1. The (D/N) PPY motif present in N6AMT1 is not found in AS3MT.



Supplementary Material, Figure 2. *AS3MT* mRNA expression in human tissues. Expression of *AS3MT* was quantified by rt-qPCR analysis on a panel of 48 normal human tissues, which were normalized by the expression level of *ACTB* and liver was selected as the reference for comparison with all other tissues.



Supplementary Material, Figure 3. Arsenic species profile analysis by HPLC-ICP-MS.

Representative chromatograms of standard control (Upper Image) and samples treated with either iAs^{III} (Lower left panel) or MMA^{III} (Lower right panel) for 3 days between these two cell lines are shown. This figure shows the conversion from MMA^{III} to DMA in UROtsa cells with enhanced N6AMT1 expression.